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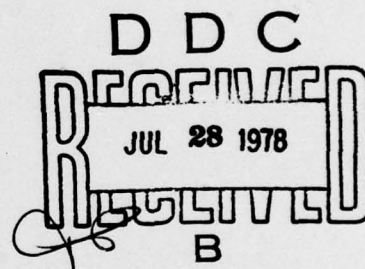
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## Measuring the Quality of Navy Life

Richard J. Orend, Robert N. Gaines,  
Kenneth W. Stroad, and Marsha J. Michaels

Presentation at the  
19th Conference of the  
Military Testing Association  
San Antonio, Texas October 1977



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variable list and a systematic balanced approach. Beyond these basic considerations are such factors as expectations and Navy experience, which may color the perceptions of individuals and thereby influence reenlistment decisions.

The usefulness of qualify of life research will depend on our ability to account for each of these factors in a systematic way. By systematic we mean to evaluate decisions so that the impact of each of these factors can be identified and measured. From this base it will be possible to generate policy which reflects the reasons for negative evaluations of the Navy and the precise means to turn such evaluations (and presumably behavior) around.

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### PREFATORY NOTE

This paper is based on a presentation given at the 19th Conference of the Military Testing Association, October 17-21, 1977, at San Antonio, Texas. The conference was hosted by the Air Force Human Resources Laboratory and the Air Force Occupational Measurement Center.

Dr. Richard J. Orend, the paper's author, is a Senior Staff Scientist in the Alexandria Research Office of HumRRO's Eastern Division. The information presented in this paper was developed by Dr. Orend while he was directing a research project for the Navy Personnel Research and Development Center, "Navy Exit Questionnaire."

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## MEASURING THE QUALITY OF NAVY LIFE

Richard J. Orend, Robert N. Gaines,  
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### INTRODUCTION

Ultimately, the military's interest in the quality of life reduces to two basic questions: (1) will improving the quality of life bring increased reenlistment rates and, by extension, greater enlistment interest, and (2) how is improvement in the quality of military life related to the on-the-job productivity of military personnel? If it can be shown that significant improvements will occur in these areas as a result of changes in the perceived quality of military life, then extensive research efforts will have been vindicated. If, however, the results of these efforts are simply nice to know information and "interesting" correlations, the resources spent on this research might be put to more fruitful uses. Of course, the eventual achievement of goals as ambitious as increasing reenlistment rates and productivity requires the cooperation of both researchers and policy makers, since the findings of any research efforts must be translated into concrete policies and implemented in real environments. Thus, researchers must operate within the constraints of feasible policies and policy makers must be willing to experiment and modify some traditional ideas and procedures if useful results are to be forthcoming.

Our purpose here is to examine efforts to develop the first stages of this process, namely, the measurement of the quality of military life. There are two distinct elements to this development, conceptual and methodological. Previous efforts to develop quality of life measures in the military have suffered because they generally ignored the conceptual aspects of the development process. The most important implications of this omission are the failure to treat all aspects of the quality of life which might be relevant to reenlistment decisions and productivity and the absence of a means to evaluate the lists which were developed. Essentially, there was no basis to judge, *a priori*, the inclusion of particular elements of life quality and there was no structure to serve as a heuristic by which additional variables or dimensions could be evaluated. This led to instruments which excluded a large number of potentially useful variables and to the measurement of what were presumably similar concepts with rather divergent indicators.

Another conceptual problem which has received insufficient attention is the decision process by which perceptions of military life are transformed into decisions about behavior. Of particular importance there are questions about the relationship of job and non-job activities and the context in which decisions about reenlistment are made. That context includes the alternative courses of action open to individuals, the relative importance of each of the factors in the quality of military life, experiences in the military, and the fulfillment of expectations about what military life would be like. Each of these factors can influence an individuals' evaluation of military life, i.e., its quality, and decisions about whether to remain in the military.

As is evident from the foregoing discussion the approach we follow is very broad and is intended to include all factors which may influence quality of life perceptions. This approach represents our initial attempt to identify a broad range of variables which may influence the behavior of military personnel and to examine interactions between perceptions of different aspects of military life, and between those perceptions and

the context in which they are made. Our particular emphasis on all elements of the military life situation does not preclude narrow approaches which focus on one or a limited number of the factors which we feel are relevant to the discussion of the quality of military life.<sup>1</sup> In the following discussion an initial attempt on developing a general model will be described.

## MEASURING THE QUALITY OF LIFE: A CONCEPTUAL FRAMEWORK

The lessons learned, both from examining the theoretical and methodological issues inherent in the previous research and from inspecting actual components of research instruments employed in these studies, will be applied in the following to the construction of a conceptual framework applicable to the measurement of the quality of Navy life. The process through which this framework will be fashioned involves: (1) establishing a theoretical structure which provides a rationale of life quality assessment; (2) identifying a set of life quality factors which adds substance to the theoretical structure; and (3) explaining how the resultant conceptual framework satisfies each requirement inherent in measuring quality of life.

A Theoretical Structure for Measuring Quality of Life: The theoretical structure offered here for the measurement of life quality has for its foundation the assertion that the quality of an individual's life is a positive function of the degree to which the individual's needs are satisfied. Thus, if nearly all of an individual's needs are being met, then his evaluation or expressed satisfaction with the quality of that life will be very high. If almost none of his needs are being met, then the evaluation of his life quality will be very low.

Based on the assertion above, the notion of quality of life here receives its primary structure from its analysis into several need categories. While a number of perhaps equally informative need taxonomies exist,<sup>2</sup> the most commonly accepted and frequently employed scheme of categorization is that proposed by Maslow.<sup>3</sup> This analysis will follow an approach adopted by several other quality of life studies by utilizing categories which reflect only slight deviation from the pattern established by Maslow's need hierarchy.<sup>4</sup>

The four categories used will be termed: (1) safety and comfort; (2) belonging and love; (3) esteem; and (4) self-actualization. It is with respect to these categories, which serve as sub-scales of life quality, that overall quality of life will be measured.

Having received primary structure from an analysis of its conceptual contents into need categories, the notion of quality of life achieves secondary structure when these categories are themselves analyzed to reflect the logical distinction which exists between

<sup>1</sup> Work by David Bowers, which focuses on the job related aspects of Navy life, is an example of the more restricted approach which has produced useful results.

<sup>2</sup> On this point see Arnold Mitchell, "Life Ways and Life Styles" (Menlow Park, CA: Stanford Research Institute, 1973), p. 5.

<sup>3</sup> See Abraham H. Maslow, "Motivation and Personality" (New York: Harper and Row, Publishers, Inc., 1954), pp. 80-98.

<sup>4</sup> Instances of studies which follow Maslow's categorization of needs include Angus Campbell, "Aspiration, Satisfaction, and Fulfillment," *The Human Meaning of Social Change*, Ed. Angus Campbell and Philip E. Converse (New York: Russell Sage Foundation, 1972), 441-466, and Patricia A. Pecorella, *Predictors of Race Discrimination in the Navy* (Ann Arbor, Mich: Institute for Social Research, University of Michigan, 1975).



"quality of life" and "quality of work." This distinction is based on the premise that some different factors impinge on our lives in work and nonwork situations and insofar as this condition exists, these life dimensions and the context in which they operate should be separately evaluated. In the military this distinction may be somewhat less pronounced because of the overall control exercised on various elements of behavior, such as family separation and *living and working on post*, often with the same supervisors.

The result of this secondary analysis is a conceptual matrix which permits assessment of both quality of life and quality of career with respect to each of the need categories. Table I provides a general representation of that matrix.

**Factors in Quality of Life/Work:** Furnished above was a theoretical structure for the notion of life/work quality assessment. The objective now is to supply a set of factors which may be utilized as specific measures of quality of life/work. The factors may be generated by means of the following procedure. First, the component variables from each of the civilian and military related quality of life/work studies may be analyzed on the basis of their general content and logically associated into groups of similar variables. The crucial concepts common to groups of variables were then isolated and identified as preliminary life/work factors. Next, to this preliminary group was added another group of factors discovered in an initial analysis of the need categories furnished by the theoretical structure. The resultant factor set, which is composed of 39 elements, is illustrated in Table II along with corresponding variables generated in previous studies.

The quality of life/work factors set having thus been presented, an observation with respect to the exhaustiveness of this set is in order. In Table II, the factor set not only exhausts each of the variables utilized to assess quality of life/work of the military related studies, but also includes 80 percent of the variables employed to measure quality of life and quality of career in the civilian related studies. In this way, the factor set displays a clear superiority of extension over the various sets of life/work quality variables used in the military related studies, and demonstrates a coverage of the variables critical to quality of life and quality of work measurement which is roughly equivalent to the more specialized civilian related studies. Second, despite the degree to which the factor set exhausts variables relevant to the assessment of quality of life/work, it must be considered a provisional set. This is because certain factors may be added or subtracted from the set based on the results of empirical investigation, conclusions derived from logical inspection of the theoretical structure, or specific research requirements.

## MEASURING NAVY QUALITY OF LIFE/WORK A RESEARCH DESIGN

### General Approach

The foregoing analysis provides a basic model for the study of the quality of life/work in any context. In the proposed model we focus on the satisfaction of individuals with their military (Navy) lives, in both life and career situations. An analysis built on this framework can provide the basis for a relatively easy to administer general test for use with Navy personnel.

The focus of this discussion is both substantive and methodological. Substantively, we seek to specify some of the major problems confronting the Navy in terms of general satisfaction of personnel. Our concern is to first identify the general factors which comprise the total life space of Navy personnel, then to determine which of those factors is most closely associated with behavioral decisions, specifically the decision to reenlist.



Table I

## The Conceptual Framework

	<u>Life</u>	<u>Work</u>
<b>Safety and Comfort</b>	Health and Medical Care Personal Safety Living Essentials Local Environment Convenience	Income Secure Employment Retirement, Medical, and Other Fringe Benefits Work Environment Job Convenience Sufficient Resources to Perform Job Organizational Climate Competence of Supervisor
<b>Belonging and Love</b>	Contribution to Community and Society Social Life and Relationships Relationships With Close Friends Relationships With Nuclear Family	Interpersonal Relationships in the Work Environment Work Related Friendships Family Disruption
<b>Esteem</b>	Self-Esteem Freedom of Choice and Expression Equality	Authority Responsibility Occupation Related Prestige Freedom to Decide How Work Should be Done Participation in Decisions Affecting Own Future Meaningful Work
<b>Self Actualization</b>	Cognitive Development Affective Development Recreation Travel	Skill Development Utilization of Personal Skills Opportunity for Advancement Advancement on the Basis of Merit Interesting Work Creative Experience

Table II  
Factors of Quality of Life/Career

Factor Set	Wilson, Flanagan, and Uhlener	Petty and Sheil	Holz and Gitler	House, Livingston, and Swinburn	Survey Research Center
Health and Medical Care	Health and Personal Safety	Medical Plans and Fringe Benefits	Being provided with good Medical and Dental Care Facilities	Health Hazardous Substances	
Personal Safety		Personal Physical Safety		Safety	
Living Essentials		Owing a Home	Having Decent Housing and privacy in the Barracks Having good quality, sufficient quantity and proper ser- vice of food.	Housing Accumulated Assets Privacy Essential Living Costs	
Local Environment				Ecosystem Land Use Climate Noise Water Pollution Air Pollution	
Convenience			Having Facilities Available on the Post that Make Life Easier	Public Transportation Transportation Services	
Contributions to Community and Society	Social, Community and Civic Activities	Involvement in Community Life			
		Opportunity to Make a Lasting Contri- bution to Society			
Social Life and Relationships	Relations with Parents, Siblings, or other Relatives				
	Socializing				
Relations with Nuclear Family	Relations with Spouse (or girl- friend(s)/boy- friend(s))			Primary Social Relationships	
	Having and Raising Children				
Relations with Close Friends	Relations with Close Friends			Secondary Social Relationships	
Self-Esteem	Understanding and Appreciating Self		Being Treated like an Individual and not like another number		
Equality			Being Paid a Fair Salary Equal to What Civilians make Getting Equal Treat- ment Regardless of Race	Equality	

Table II (Continued)

## Factors of Quality of Life/Career

Factor Set	Wilson, Flanagan, and Uhlener	Petty and Sheil	Holz and Gitler	House, Livingston and Swinburn	Survey Research Center
Freedom of Choice and Expression	Philosophical and Ethical Values	Personal Freedom in Expression of Ideas	Being Able to Cut One's Hair the Way One Wants Shortening the Length of a Tour and Letting one Choose the Location	Choices in Life	
			Being Able to be What One Wants to be on One's Own Time	Use of Free Time Leisure	
Cognitive Development	Intellectual Activities	Opportunity for Further Civilian Schooling	Having Educational Opportunities and Post Discharge Educational Benefits	Education	
		Opportunity to Develop into a Well- Rounded Individual; Opportunity to Realize Maximum Potential			
Affective Development	Aesthetic Activities			Culture	
	Spiritual Experi- ences or Beliefs			Cultural and Spiritual	
Travel		Opportunity to Travel			
Recreation	Active Recreational Activities Passive Recre- ational Activities			Recreational Resources	
Income	Material Well-Being and Security for the Future	Pay		Income Income Distribution Discretionary Income	The Pay is Good
Secure Employment		Steady Work		Employment Economic Security	The Job Security is Good
Retirement, Medical and Other Fringe Benefits		Retirement Plan		Accumulated Assets	My Fringe Benefits are Good
Work Environment					Physical Surroundings are Pleasant
Job Convenience		Graphic Location of Job			The Hours are Good Travel to and From Work is Convenient
Organizational Climate		Policies of Organization Toward Employees	Getting Rid of Rules and Regulations that Don't Help Per- formance		I am Free From Conflicting Demands that Other People Make of me
Sufficient Resources to Perform Job					I Receive Enough Help and Equipment to get the Job Done I have Enough Information to get the Job Done

Table II (Continued)

## Factors of Quality of Life/Career

Factor Set	Wilson, Flanagan, and Uhlaner	Petty and Sheil	Holz and Gitler	House, Livingston, and Swinburn	Survey Research Center
Competence of Supervisor		Technical Ability of Supervisor	Having Officers and Non-Commissioned Officers That Know Their Jobs		My Supervisor is Competent in Doing his Job
Family Disruption		Lack of Family Separation			
Interpersonal Relationships in the Work Environment		Good Interpersonal Relationships with Supervisors Good Interpersonal Relationships with Peers Good Interpersonal Relationships with Subordinates			I am given a lot of Chances to Make Friends My Coworkers are Friendly and Helpful
Work Related Friendships					
Meaningful Work	Occupational Role (Job)		Making the Work Meaningful and Worthwhile and Eliminating the Busy Work		I can see the Results of my Work The Problems I am asked to solve are hard enough
Responsibility		Amount of Personal Responsibility			My Responsibilities are Clearly Defined
Authority		Opportunity to be a Leader Opportunity to Control and Direct Others			I have Enough Authority to do my Job
Occupation Related Prestige		Highly Respected Job		Status	
Participating in Decisions About Own Future		Participating in Decisions About own Future		Democratic Process	
Freedom to Decide How Work Should be Done		Freedom to do the Job the Best Way	Being Able to do One's Work Without Having to "Hurry up and Wait"		I am Given a lot of Freedom to Decide How I do my Work
Skill Development	Developing Skills in Manual Areas	Chance for Training and Learning on Job		Personal Skills	I have an Opportunity to Develop my Special Abilities
Utilization of Personal Skills		Ability to Use Own Technical Skills			I am Given a Chance to do the Things I do Best
Opportunity for Advancement		Chance for Advancement			
Advancement on the Basis of Merit		Fair Evaluation of Performance	Being Able to Advance Without Having to "Know the Right People"	Economic Opportunity	



Table II (Continued)  
Factors of Quality of Life/Career

Factor Set	Wilson, Flanagan, and Uhlaner	Petty and Sheil	Holz and Gitler	House, Livingston, and Swinburn	Survey Research Center
Interesting Work		Interesting Work			The Work is Interesting
Creative Experience	Creativity	Producing Original Results or Products			

<sup>1</sup>Wilson, Sandra, Flanagan, John, and Uhlaner, J.E. *Quality of Life as Perceived by 30 Year Old Army Veterans*. Arlington, Virginia: U.S. Army Research Institute for the Behavioral and Social Sciences, 1975.

<sup>2</sup>Petty, M.M., and Sheil, Timothy. "The Use of Expectancy Theory in the Explanation of Turnover in ROTC." *Journal of Vocational Behavior*, 6 (1975).

<sup>3</sup>Holz, Robert F., and Gitler, George. *Assessing the Quality of Life in the U.S. Army*, Arlington, Virginia: U.S. Army Research Institute for the Behavioral and Social Sciences, 1974.

<sup>4</sup>House, Peter, Livingston, Robert, and Swinburn, Carol. "Monitoring Mankind: The Search for Quality," *Behavioral Science*, 20 (1975).

<sup>5</sup>Robinson, John, Athanasiou, Robert, and Head, Kendra. *Measures of Occupational Attitudes and Occupational Characteristics*, Ann Arbor, Michigan: Institute for Social Research, 1969.

## Comparative Analysis

One of the most important methodological considerations in this research will be the use of comparison. That is, we want to analyze satisfaction not just with the Navy per se, but in comparison with what is expected in the civilian world, the standard against which individuals will be evaluating Navy life. Certain aspects of the Navy, e.g., pay, may displease everyone, but the relevance of a particular perception becomes important only when there is an alternative which is perceived as both better and available. Thus, we expect to be able to learn more about reenlistment decisions from a comparison of Navy and civilian alternatives than from a Navy evaluation alone.

## Other Contextual Factors

In a similar vein, each of the other contextual considerations mentioned previously is potentially important in the analysis of perceptions of the quality of Navy (military) life. For example, a difference in the perceived ability of the Navy to provide free choice in jobs vs. civilian choice is important only insofar as that freedom is significant to the individual. Another more popular example is the question of hair length. Most of the young men in the Navy feel that hair length regulations are restrictive, more restrictive than in civilian life. However, whether or not this perception is important in a reenlistment decision is at least partially a function of how important hair length is to the individual. We shall call this particular contextual consideration salience.

Another consideration is the set of expectations about Navy service enlistees brought with them. If I entered the Navy expecting to fly airplanes and ended up chipping paint, it seems likely that I would be greatly dissatisfied with at least the work dimensions of my Navy career. While the discrepancy may not be that large in most cases, there are undoubtedly many instances in which the reality of Navy life did not correspond with the expectations. At a minimum we would expect that such considerations would color evaluation of the Navy in the specific area where differences occur. They could influence Navy-civilian comparisons as well.<sup>1</sup>

Still another part of the decision context is what actual experiences individuals had while they were in the Navy. By experience we mean in the institutional sense, such as rating, proportion of sea duty, and schooling, rather than the day-to-day interactions with peers and supervisors. The latter type of experience will be reflected in the specific variables evaluated by each individual and would not necessarily be associated with such general characteristics as rating. The former experiences are related to the constant impact of being at sea or working a particular type of job. While the previous context factors had to be measured and analyzed simultaneously with perceptions of quality of life variables, these experiences can be evaluated on a *post-hoc* basis by dividing respondents into groups which exhibit each of the relevant characteristics.

## SUMMARY OF THE CONCEPTUAL MODEL

The foregoing discussion may be summarized as follows:

(1) Behavior of Navy personnel with regard to a reenlistment decision is a function of perceptions of Navy life modified by each individual's comparison to alternatives in civilian life and by the importance of that variable in their hierarchy of values.

<sup>1</sup> A particular methodological problem is associated with the measurement of expectations. The expectation being addressed may be 3 or more years old and very difficult to assess given bases which developed as a result of active duty experiences.

(2) The variables which exhibit potential significance in these decisions may be identified through the use of a needs model which specifies the areas which are likely to be important to various groups of Navy personnel. Such a model helps to insure the comprehensiveness of the variable list and a systematic balanced approach.

(3) Beyond these basic considerations are such factors as expectations and Navy experience, which may color the perceptions of individuals and thereby influence reenlistment decisions.

The usefulness of quality of life research will depend on our ability to account for each of these factors in a systematic way. By systematic we mean to evaluate decisions so that the impact of each of these factors can be identified and measured. From this base it will be possible to generate policy which reflects the reasons for negative evaluations of the Navy and the precise means to turn such evaluations (and presumably behavior) around.<sup>1</sup>

<sup>1</sup> Data were collected and evaluated in an initial test of this model in an NPRDC study conducted in 1976. As of this writing the report which resulted from this study has not been released for general distribution.